

Improvement in Corrugation Detection (R3.108)

Background

With the aim to increase freight capacity, tractional loads and vehicle speed, it is inevitable that corrugation growth will continue to become more prevalent throughout the Australian railway networks. Improved corrugation detection will lead to improved corrugation management by the below rail manager which in turn reduces maintenance for the operator i.e. lower wheel and suspension maintenance, lower internal noise and greater compliance with noise standards.

Objective

The project aims to provide means of filtering raw vibration data from onboard vibration measurement systems for conclusive identification and quantification of rail corrugation growth.

Outcomes

The project will rank defects in order of severity and develop definitions and a reporting index with particular emphasis on early detection of long wavelengths.

Benefits

The primary benefits of this project stem from the early detection of corrugations allowing early correction. This will in turn reduce maintenance costs. The cost-benefit analysis associated with cost savings in track degradation due to the present occurrence of long pitch corrugations along the DIRN freight corridor have been estimated to be approximately \$4 million per year.

Project timeframe

1 September 2008 to 31 August 2011